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FRIED, PHYLLIS J., and JOSHUA LEDERBERG, University of Wisconsin, Madison, Wis.--Linkage in E. coli K-12.--The distribution of unselected markers among selected prototroph recombinants had implied that the known loci in E. coli strain K-12 were located on one linkage group. Independent verification of the linkage of Lac to M was sought in crosses using other selected markers, so that these were allowed to segregate. In $\underline{M}^-\underline{Lac}^+ \times \underline{M}^+\underline{Lac}^-$, both \underline{M}^+ and \underline{Lac}^- predominated. However, there was no interaction between these factors to verify their linkage to each other. This was corroborated by the non-correlation of the factors M, S, and Th, with P, Lac, and Vl, whereas linkage correlations were found within each of the two groups.--If both selected markers of a cross were confined to one group, the segregation of the other nevertheless deviated markedly from random. (The preferential appearance in the segregants of the alleles contributed by one parent has been associated with the polarity of a recently discovered sex compatibility factor.)--The separation of M and Lac into distinct linkage groups obviates the need for postulating several mutually independent factors linked to M (Lederberg et al. 1951, Cold. Spr. Harb. Symp. XVI).

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